REMARKS

Reconsideration of this application is respectfully requested in view of the following remarks.

Claims 1-22 were pending in this application. In this Amendment, Applicant has amended claim 21 and has not canceled or added any claims. Accordingly, claims 1-22 will still be pending upon entry of this Amendment.

In the Office Action mailed July 30, 2007, the Examiner objected to claim 11 because it was designated an "Original" status even though it was amended. The Examiner rejected claims 1-2, 4, and 6-8 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,275,518 to Takahashi et al. ("Takahashi") in view of U.S. Patent No. 5,809,059 to Souissi et al. ("Souissi") and further in view of U.S. Publication No. 2003/0153338 to Herz et al. ("Herz"). Claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Takahashi in view of Souissi and Herz and further in view of U.S. Publication No. 2002/0071402 to Kockmann et al. ("Kockmann"). Claims 5 and 9-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Takahashi in view of Souissi and Herz, and further in view of Kerry et al. ("Kerry"). Claims 13-15 and 18-22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Takahashi in view of U.S. Publication No. 2001/0022806 to Adachi ("Adachi") and further in view of Herz. Claims 16-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Takahashi in view of Souissi and Herz and further in view of Kerry.

In response to the objection to claim 11, Applicant has changed the status indicator of claim 11 to "Previously Presented" to indicate that the claim has been previously amended.

Regarding the § 103 rejections, Applicant respectfully traverses these rejections. To support the rejection of the independent claims 1, 13, and 21, the Examiner relied on the combinations of Takahashi, Herz, and Souissi (claim 1) and Takahashi, Herz, and Adachi (claim 13 and amended claim 21). As discussed further below, in either case, the combination of cited art fails to render the target independent claim unpatentable under 35 U.S.C § 103(a) at least because Herz fails to disclose a system or method for adjusting a first RF device to avoid overlap with at least one other RF device, wherein hopping frequencies employed by the first device cluster in one or more frequency ranges.

In accordance with this patentable feature, Applicant has amended claim 21 to more specifically recite substantially the same feature also recited in independent claims 1 and 13. Applicant therefore respectfully submits that the amendments to claim 21 do not present new issues or claim limitations requiring further consideration or search beyond those already required for unamended claims 1 and 13. In particular, Applicant has amended claim 21 to recite wherein a microcontroller facilitates the clustering into one or more frequency ranges of a set of channels employed by a first transceiver. As alternatively recited in claims 1 and 13, embodiments of the present invention provide methods and systems for avoiding interference between a first RF device and a separate RF device (variously recited as another RF device or RF interferer), with a common feature that clustering of channels (or frequencies) used by a first RF device into a frequency range (or ranges) is performed. Operation of this feature is depicted, for example, in Figures 9, 11b, 14a, 14b and 16 of the present application. The recited clustering of frequencies in a range employed by the first RF device results in segregation of the channels used by the first device into a range (or ranges) not used by other interferers, thus avoiding or

minimizing interference. For example, as disclosed in Figures 13-14a and the appurtenant text of the present application, the clustering of WDCT device frequencies into a low frequency range below the range occupied by an 802.11 device not only avoids interference with the 802.11 device, but also "forces" the hopping frequencies used by a BT interferer to segregate into a higher frequency range. This ensures minimal interference between the WDCT and BT device because the hopping sequences used by the respective devices cluster in different frequency ranges, so that channels used by one device are not close in frequency to channels used by another device.

For convenience, included below are the relevant portions of Herz that the Examiner cited as disclosing this clustering of frequency hopping frequencies feature. In addition, to the paragraph [0340] specifically relied upon, paragraphs [00336]-[00339] are included to provide context:

> [0336] 2. With consideration to the following idea assuming that 90% of all cell phones and other devices serviced by any given base station are turned off (or are not in use) at any given time, it should be possible to use a variety of techniques in order to insure that a given micro-cell within a given chain link pathway located within that base station's cell in no way interferes with any frequency band which is currently in use, The idea, to clarify a bit further, involves using micro-cells of other devices to "fill in" the gaps between chain links either become broken or otherwise are not feasible using short range micro-cell link modality used within the rest of the chain. This objective is achieved by:
>
> [0337] a. Whenever a gap "occurs" identifying the closest neighboring devices to each gap which are currently and likely predicted to be presently not in use and,
>
> [0338] b. Applying selected devices or transmitters to fill in these physical chain link gaps. This involves using LEIA to select those devices which are located at

> [0339] i. The most opportune locations
> [0340] ii. And at signal strength levels that will assure avoidance of interference with either other nearby micro-cells or other standard cellular devices which are within transmission distance of these new larger range micro-cells. Thus, as a result, it is possible to optimize effective bandwidth spectrum which can be delivered across each gap automatically and on a dynamic ad hoc basis. Of course, if the most opportunely located "device" (per the above criteria) happens to be the base station itself, the present methodology could automatically select the unused bands for that base station creating its own micro-cell by limiting the power (thus transmission distance) to only that which is required to establish the necessary link in order to optimally minimize interference with other links or potential links which connect within that same spectrum range. Of course, as suggested, in the specification (above) this methodology applies equally relevantly to not only gaps but any link within a chain link pathway. In addition, providing optimally available amount of wireless bandwidth spectrum to that particular pair of nodes on either side of the gap, requires ***the use of frequency hopping techniques in combination with very carefully controlled transmission range control.*** Accordingly, the present system objectives are achieved by the use of a dynamic internal 2-D "map" which identifies where all presently existing and potentially useful (alternative link) micro-cells are located, their associated ***physical ranges*** and the frequencies which each cell presently contains and the potential range limitations for each present or potential candidate micro cell's associated device. (Emphasis added.)

The above passages of Herz explicitly describe methods of filling in "gaps" in communications that take place over a system that includes many communications links. Although paragraph [0340] discusses minimizing interference between potential links, the only portion that discusses frequency hopping merely states that frequency hopping techniques should be used in combination with carefully controlled transmission range control. The term "transmission range" is defined by Herz elsewhere as "power utilization" (paragraph [0141]) and

also as "signal strength" (paragraph [0176]). Thus, transmission range, as disclosed in Herz, refers to how strong a signal is.

Using frequency hopping in combination with controlling signal strength may be a useful idea to control interference, but it does not concern the recited feature that Herz purportedly discloses, wherein hopping frequencies cluster in a frequency range to facilitate RF interference avoidance. The only range disclosed by Herz is a transmission range, which is clearly a physical spatial range or a corresponding range of signal strength of a device. Accordingly, Herz fails to teach a system or method for adjusting a first RF device to avoid overlap with at least one other RF device, wherein hopping frequencies employed by the first device cluster in one or more frequency ranges. At least for this reason, the combination of Takahashi, Souissi, and Herz fails to teach or suggest the complete combination of features recited in claim 1, as well as dependent claims 2, 4, and 6-8. Likewise, the combination of Takahashi, Adachi, and Herz fails to teach or suggest the complete combination of features recited in claim 13 and amended claim 21, as well as respective dependent claims 18-20 and 22.

Regarding the rejection of dependent claims 3, 5, 9-12, 16, and 17, the additionally cited references, Kockmann and Kerry, fail to address the deficiencies in Herz as to base claims 1 and 13. Applicant therefore respectfully submits that claims 3, 5, 9-12, 16, and 17 are patentable due at least to their dependence on an allowable base claim.

In view of the foregoing, all of the claims in this case are believed to be in condition for allowance. Should the Examiner have any questions or determine that any further action is desirable to place this application in even better condition for issue, the Examiner is encouraged to telephone Applicant's undersigned representative at the number listed below.

PAUL HASTINGS JANOFSKY & WALKER LLP
875 15th Street
Washington, DC 20005
(202) 551-1700

Respectfully submitted,

Date: November 30, 2007

By: _____
Steven P. Arnheim
Registration No. 43,475

SPA/RAR/dkp
Customer No. 36183